

ABSTRACT OF THE DISCLOSURE

There are provided a plurality of optical adjusting sections, a wavelength-multiplexing section, and a control section. The plurality of optical adjusting sections, which are provided for respective wavelength bands, amplifies light beams in the respective wavelength bands. The wavelength-multiplexing section wavelength-multiplexes amplified light beams in the respective wavelength bands. The control section controls the outputs of the respective optical amplifying sections so that optical powers of the respective wavelength bands will become approximately identical at a predetermined point when wavelength-multiplexed light of the light beams in the respective wavelength bands travels to the predetermined point. This configuration makes it possible to eliminate optical power deviations between wavelength bands that would otherwise occur when an optical signal of a plurality of wavelength bands is transmitted, and to thereby make optical SNRs uniform.